Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) An assay for an analyte, comprising specifically associating the analyte with a thermostable reporter kinase, adding ADP and testing for formation of ATP wherein, prior to addition of ADP, endogenous kinase other than thermostable reporter kinase is substantially removed by washing and the residual endogenous kinase is inactivated by heating.

2. (previously presented) The assay of Claim 1, wherein the amount of reporter adenylate kinase specifically associated with the analyte is substantially proportional to the amount of analyte.

3. (previously presented) The assay of Claim 1 wherein formation of ATP is measured using luciferin/luciferase.

4. (currently amended) The assay of Claim 1 for determining presence and/or amount of an analyte in a sample, comprising

exposing the sample to a reporter adenylate kinase coupled to a binding agent specific for the analyte, so that the reporter adenylate kinase is specifically associated with any analyte present in the sample via the binding agent;

removing reporter adenylate kinase that is not specifically associated with analyte;

exposing reporter adenylate kinase specifically associated with the analyte to ADP; and

testing for formation of ATP,

wherein prior to addition of ADP residual adenylate kinase other than reporter adenylate kinase is substantially removed by heating.

5. (previously presented) The assay of Claim 1 comprising adding an ATPase to the analyte and removing the ATPase from the analyte prior to adding ADP.

6. (previously presented) The assay of Claim 5 wherein the ATPase is inactivated by heating the ATPase.

7-8. (canceled)

9. (currently amended) An assay for determining presence and/or amount of an analyte in a sample, comprising:-

exposing the sample to a detector composition, the detector composition comprising an antibody specific to the analyte coupled to a thermostable enzyme;

isolating (i) detector composition that has specifically bound to analyte from (ii) detector composition that has not specifically bound to analyte;

determining the presence and/or amount of detector composition that has bound to analyte by adding a substrate for the thermostable enzyme and measuring a product formed by conversion of said substrate to said product by said thermostable enzyme;

wherein prior to adding the substrate non-thermostable enzymes are destroyed by application of heat.

10. (previously presented) The assay of Claim 9, wherein substrate is converted into product by the thermostable enzyme and prior to addition of the substrate background compound identical to the product is removed.

11. (previously presented) The assay of Claim 10 wherein background compound identical to the product is removed by the action of enzyme or by thermal inactivation.

12-18. (cancelled)

19. (previously presented) An assay for an analyte, comprising the steps:-

(a) specifically associating the analyte with a thermostable reporter kinase;

(b) washing to remove endogenous non-thermostable kinase and thermostable reporter kinase not specifically associated with the analyte;

(c) heating to inactivate endogenous non-thermostable kinase not removed by step (b); and

(d) adding ADP and testing for formation of ATP.